

REMARKS

This Amendment, submitted in response to the Office Action dated April 1, 2010, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1, 3-7, 9-16 and 20 are all the claims pending in the application. Claims 1 and 7 have been amended. Applicants submit that no new matter has been added. Support for the amendment can be found in the figures.

I. Rejection of claims 1, 7 and 13 under 35 U.S.C. § 103

Claims 1, 7 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1) and further in view of Border et al. (US 2002/0071436 A1) and Tam (US 6,622,172 B1).

Claim 1

Claim 1 recites:

A communication system, comprising:
a transmitter for transmitting one or more data packets;
at least one receiver connected to the transmitter, for receiving the data packets and transmitting to the transmitter one or more response signals in response to the received data packets; and
a multiplexer for multiplexing and transmitting to the transmitter the response signals transmitted from the receiver, and transmitting the transmitted data packets from the transmitter to a corresponding receiver, the multiplexer composed of:
a queue status monitor; and
a congestion control adjuster,
wherein the queue status monitor monitors a queue status of at least one of the transmitted data packets and the response signals, and

wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status, and
wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster disposed between the transmitter and the at least one receiver predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a predetermined period of time, as instructed by the congestion control adjuster, and
wherein the queue status monitor is disposed inside the multiplexer.

On pages 10-11 of the Office Action, the Examiner states that Tam discloses in FIG. 1 and column 10 lines 1-44 and column 23 lines 39-50 the feature “wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a second predetermined period of time, as instructed by the congestion control adjuster,” as recited in claim 1.

Fig. 2 of Tam discloses that the TCP communication protocol 10 of the receiver's computer 6 receives data packets (DATs) and provides an indication of sender's computer congestion window size based on the received DATs. If the sender's computer congestion window size is small, the receiver's computer transmits an ACK for every DAT received from the sender's computer. On the other hand, if the sender's computer congestion window size is large, the receiver's computer transmits an ACK sparingly. See col. 10, lines 1-30.

That is, Tam only discloses adjusting the number of times the ACK is transmitted according to a degree of congestion and fails to teach or suggest the response signal holding/compressing unit for compressing response signals, as recited in claim 1.

Accordingly, even if Aweva, Hann, Border, and Tam are combined, it is difficult for one of ordinary skill in the art to derive the feature of claim 1 “wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a second predetermined period of time, as instructed by the congestion control adjuster.”

Further, FIG. 2 of Tam discloses that the congestion detection module 20 included in the TCP communication protocol 10 of the receiver’s computer 6 detects whether there is congestion or not based on the received DAT.

However, as recited in claim 1, the congestion control adjuster disposed between the transmitter and the at least one receiver predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver.

Accordingly, by carrying out TCP congestion control by the multiplexer, this results in 1) reducing the load of the TCP congestion controls of the transmitter or receiver, and 2) carrying out congestion control with respect to all the downlink and uplink traffic.

Therefore, Tam fails to teach or suggest the feature “the congestion control adjuster disposed between the transmitter and the at least one receiver predicts that congestion will occur with the response signals transmitted to the transmitter from the receiver,” as recited in claim 1.

Accordingly, it is difficult for one of ordinary skill in the art to derive the feature “wherein the receiver includes a response signal holding/compressing unit for, if the congestion control adjuster disposed between the transmitter and the at least one receiver predicts that

congestion will occur with the response signals transmitted to the transmitter from the receiver, compressing the response signals for a second predetermined period of time, as instructed by the congestion control adjuster” from the combination of cited inventions Aweva, Hann, Border, and Tam.

Consequently, claim 1 and its dependent claims 3-6 and 20 should be deemed allowable.

To extent independent claims 7 and 13 recite similar subject matter, claims 7 and 13 and their respective dependent claims 9-12 and 14-16 should be deemed allowable for at least the same reasons.

II. Rejection of claims 3-5, 9-11, 14-16 and 20 under 35 U.S.C. § 103

Claims 3-5, 9-11, 14-16 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1), Border et al. (US 2002/0071436 A1) and Tam (US 6,622,172 B1) as applied to claims 1, 7, and 13 above, and further in view of Guttman et al. (USP 7,031,259).

Claims 3-5, 9-11, 14-16 and 20 should be deemed allowable by virtue of their dependency to amended claims 1, 7, and 13 for at least the reasons set forth above. Moreover, Guttman does not cure the deficiencies of Aweva and Hann and Border and Tam.

III. Rejection of claims 6 and 12 under 35 U.S.C. § 103

Claims 6 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1) Border et al. (US 2002/0071436 A1) and Tam (US 6,622,172 B1) as applied to claims 1, 7 and 12 above, and further in view of Norrell et al. (USP 6,853,637 B1).

Claims 6 and 12 should be deemed allowable by virtue of their dependency to amended claims 1 and 7 for at least the reasons set forth above. Moreover, Norrell does not cure the deficiencies of Aweva and Hann and Border and Guttman.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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